

## CLAIMS

1. (Cancelled)
2. (Amended) A method of fabricating a thin-film compound solar cell having an n-type buffer layer formed for providing heterojunction with a p-type semiconductor light absorbing layer formed on a back electrode, wherein the buffer layer is formed on the light absorbing layer by chemical bath deposition (CBD) process using an aqueous solution for dipping therein a surface of the light absorbing layer, wherein the CBD process comprises a first step of holding the solution with the light absorbing layer surface dipped therein at a first preset temperature for a first preset time, a second step of heating the solution for a second preset time to a second temperature higher than the first temperature and a third step of holding the solution at the second temperature for a third preset time.
3. (Amended) A method of fabricating a thin-film compound solar cell as defined in claim 2, wherein the aqueous solution is stirred all for the first, second and third steps.
4. (Amended) A method of fabricating a thin-film compound solar cell having an n-type buffer layer formed for providing heterojunction with a p-type semiconductor light absorbing layer formed on a back electrode, wherein

the buffer layer is formed on the light absorbing layer by chemical bath deposition (CBD) process using an aqueous solution for dipping therein a surface of the light absorbing layer, wherein, in the CBD process of forming the buffer layer on the light absorbing layer whose surface is dipped in an aqueous solution for depositing particles thereon, pH of the solution is changed from a low level to a high level to cause the buffer layer to have different quality of deposit layers therein.

5. (Cancelled)

6. (Amended) A method of fabricating a thin-film compound solar cell as defined in claim 2, wherein pH of the aqueous solution is regulated to a higher value in the third step.

7. (Cancelled)

8. (Amended) A method of fabricating a thin-film compound solar cell having an n-type buffer layer formed for providing heterojunction with a p-type semiconductor light absorbing layer formed on a back electrode, wherein the buffer layer is formed of layered deposits of particles of n-type semiconductor material and the layered deposits are different from each other by grain sizes gradually or stepwise increasing in the deposits in a direction outward from the light absorbing layer.

9. (Cancelled)

10. A method of fabricating a thin-film compound solar cell having an n-type buffer layer formed for providing heterojunction with a p-type semiconductor light absorbing layer formed on a back electrode, wherein the buffer layer is formed of layered deposits of particles of n-type semiconductor material and the layered deposits are different from each other by pH-values being smaller in lower side deposit and larger in upper side deposit in a profile of the buffer layer.